CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 93 - 054

NPDES NO. CA0028134

WASTE DISCHARGE REQUIREMENTS FOR:

PRAXAIR, INC.
LINDE DIVISION
PITTSBURG, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereafter called the Board), finds that:

1. Praxair Inc. (hereinafter called the discharger, submitted an NPDES Permit Application dated November 2, 1992 for reissuance of NPDES permit No. CA0028134.

2. The discharge of wastewater from the facilities is currently governed by Waste Discharge Requirements, Board Order No.88-086.

3. The discharger produces 835 tons per day of industrial gases (oxygen, nitrogen, and argon) and currently discharges treated wastewater containing pollutants into an unnamed drainage ditch which flows into Kirker Creek at a point just north of the plant. Kirker Creek is tributary to New York Slough, and both are waters of the United States. All wastewater is treated by means of sedimentation and pH control prior to discharge.

4. The report of waste discharge describes the waste discharge as follows:

   a. Waste 001A consists of an average 12,600 gallons per day (gpd) of non-contact cooling tower blow down. This waste is treated with Ozone prior to discharge via the treatment system.

   b. Waste 001B consists of an average of 1,000 gpd of compressor condensate waste water. This waste is also treated with Ozone prior to discharge via the treatment system.

   c. Waste 001C consists of an average of 414 gpd of stormwater runoff from the process area and is treated by means of oil separator prior to discharge via the treatment system.

   d. Waste 001D consists of an average of 2,000 gpd of filter backwash water. This waste is discharged via the treatment system.

e. Waste 001E consists of an average of 86 gpd of truck and equipment washwater. This waste is treated by means of oil separator prior to discharge via the treatment system.

f. Waste 002, 003, 004, 005, and 006, consists of an estimated 9,400 gpd of stormwater runoff from yard drains. This waste is discharged into a drainage ditch and is considered uncontaminated.

5. The discharger has implemented a stormwater management plan. This plan consists of diverting potentially polluted storm runoff for treatment prior to discharge. Uncontaminated runoff from paved areas is discharged via yard drains into an unnamed drainage ditch, also tributary to Kirker Creek.

6. The U.S. Environmental Protection Agency (EPA) and the Board have classified this discharge as a minor discharge.

7. The Board adopted a Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986, and the State Water Resources Control Board approved it on May 21, 1987. The Board Adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Revised Basin Plan) on December 11, 1991, with State Board approval pending. Both the Basin Plan and the Revised Basin Plan contain water quality objectives for San Pablo Bay and contiguous waters.

8. The beneficial uses of Suisun Bay, Delta and contiguous water bodies are:

   a. Water contact recreation
   b. Non-contact water recreation
   c. Navigation
   d. Ocean commercial and sport fishing
   e. Wildlife habitat
   f. Estuarine habitat
   g. Fish spawning and migration
   h. Industrial process and service supply
   i. Preservation of rare and endangered species

9. The Basin Plan prohibits (a) discharge of any wastewater which has particular characteristics of concern to beneficial uses at any point at which wastewater does not receive a minimum initial dilution of 10:1 and (b) discharge into any non-tidal water, dead-end slough, or similar confined waters, or into its immediate tributaries. The Board finds that the proposed discharge does not have particular characteristics of concern, provided that the discharge limitations contained in this Order are met.

10. Effluent limitation and toxic effluent standards established pursuant to Section 301, 304, and 307 of the Federal Water

Pollution Control Act and amendments thereto are applicable to the discharge.

11. Effluent limitation guidelines requiring the application of the best practicable control technology currently available (BPT) have been promulgated by the U.S. Environmental Protection Agency (EPA), for the discharge resulting from the production of oxygen and nitrogen by air liquification, Subcategory 40 CFR Part 415.490. Effluent limitations of this order for the final discharge are based on the BPT, Basin Plan, Federal Regulations 40 CFR Part 415.490, other State plans and policies, current plant performance, and best professional judgement. The limitations are considered to be those attainable by BAT in the judgement of the Board.

12. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21110) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

13. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

14. The Board, in a public meeting. heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Praxair, Inc., in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Chemicals used in any of the cooling towers for algae control or corrosion and deposition inhibition shall not contain copper, zinc, chromium or other heavy metal constituents.

B. Effluent Limitations

1. The discharge of Waste E-001 containing constituents in excess of the following limits is prohibited:

Constituent	Units	30-Day Average	Daily Maximum
Oil & Grease	mg/l	10	20
	lb/day	1.62*	3.24*
Settleable Solids	ml/1-hr	0.1	0.2
TSS	mg/l	30	45

* Mass emission based on 40 CFR Part 415.492.

2. The discharge of Waste E-001 containing heavy metals in excess of the following limits is prohibited:

Constituent	Units	Daily Maximum
Arsenic	ug/l	20
Cadmium	ug/l	9.3
Chromium VI (1)	ug/l	11
Copper	ug/l	4.9
Lead	ug/l	5.6
Mercury	ug/l	1
Nickel	ug/l	7.1
Silver	ug/l	2.3
Zinc	ug/l	58

(1) The Discharger may meet this limit as total chromium

3. The pH of the waste shall not exceed a pH of 8.5 or be less than 6.5.

4. Effluent Toxicity

Acute Toxicity

The survival of organisms in undiluted effluent shall be a 3-sample medium value of not less than 90 percent survival, and a 90 percentile value of not less than 70 percent survival. The 3-sample median and 90th percentile effluent limitations are defined as follows:

3 sample median: If one of the past two or fewer samples shows less than 90 percent survival, then survival of less than 90 percent on the next sample represents a violation of the effluent limitation.

90th percentile: If one or more of the past ten or fewer samples is show less than 70 percent survival, then survival of less than 70 percent on the next sample represents a violation of the effluent limitations.

5. The temperature of the waste shall not exceed 86 F.

C. Receiving Water limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the state at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a. Dissolved oxygen:	7.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive samples shall not be more than 80 percent of the dissolved oxygen content at saturation.	
b. Dissolved sulfide:	0.1 mg/l maximum.	
c. pH:	The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.	
d. Un-ionized Ammonia (as N):	0.025 mg/l	Annual Median
	0.16 mg/l	Maximum at any time

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in Accordance with such more stringent standards.

D. Provisions

1. Neither the treatment nor the discharge of pollutants shall create a nuisance as defined in the California Water Code.

2. The discharger shall comply with the limitations, prohibitions, and other provisions of this order immediately upon its adoption by the Board except as noted below.

3. The discharger shall investigate thoroughly, and implement all reasonable treatment and source control measures to reduce the concentrations of copper according to the following time schedule:

	Task	Deadline
a.	Determine sources and develop a source control and treatment proposal acceptable to the Executive Officer for copper reduction in Waste 001. This proposal shall include a program to assess the technical and economic feasibility of achieving compliance with the December 1, 1994 limitations specified in B.2 of this order.	November 1, 1993
b.	Commence work in accordance with the proposal and time schedule submitted pursuant to the above task as approved by the Executive Officer.	December 1, 1993
c.	Submit quarterly progress reports summarizing the work accomplished, work underway, problems encountered and foreseen which may affect compliance with limitations specified in B.2, and discuss steps taken to resolve such problems.	Each calendar quarter on the 15th day of the following quarter
d.	Achieve full compliance with December 1, 1994 limitations for copper concentration in Waste 001 as specified in B.2.	December 1, 1994

4. The discharger shall comply with the Self-Monitoring Program as adopted by the Board. Upon review of the data submitted as part of this program, pursuant to EPA regulations 40 CFR 122.62, 122.63, and 124.5, the Board may at any time, revise the Order.

5. The discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements" dated December 1986, except items B.3 and C.11.

6. Compliance with the acute toxicity limitation in effluent limitation B.4 of this Order shall be evaluated by measuring survival of test fishes exposed to undiluted effluent of 96 hours. Each fish species represents a single sample. The toxicity tests will be performed according to protocols approved by the U.S. EPA or State Board or published by the American Society for Testing and Materials (ASTM) or American Public Health Association. Two fish species will be tested concurrently. These shall be the most sensitive two species

determined from concurrent screening(s) of three species: three-spine stickleback, rainbow trout and fathead minnow. If concurrent screenings have been conducted prior to this permit reissuance, the existing data may be submitted to the Board. If such information is found to meet the requirement of the Basin Plan, Further screenings would not be required.

7. The discharger shall review and update by November 1 each year its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this order pursuant to Section 13387 of the California Water Code.

8. All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations. (40 CFR 122.42)

9. Pursuant to Environmental Protection Agency regulations [40CFR122.42(a)] the discharger must notify the Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture a toxic pollutant not reported in the permit application, or (2) as discharge of a toxic pollutant not limited by this permit has occurred. or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).

10. This permit shall be modified or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(c), and (d), 303, 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved.

    (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or,

    (b) Controls any pollutant not limited in the permit.

    The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

11. This Board's Order No. 88-86 is hereby rescinded.

12. This order expires on June 16, 1998 and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

13. This order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing , provided the Regional Administration, U.S. Environmental Protection Agency, has no objections.

I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 16, 1993.

Steven R. Ritchie,
Executive Officer

Attachments: Standard Provisions and Reporting Requirements dated December 1986
Resolution No. 74-10
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

PRAXAIR, INC
LINDE DIVISION
PITTSBURG, CONTRA COSTA COUNTY

NPDES NO. CA0028134
ORDER NO. 93 - 054

CONSISTS OF

PART A, DATED DECEMBER 1986

AND

PART B

SELF-MONITORING PROGRAM

PART B

DESCRIPTION OF SAMPLING STATIONS
AND
SCHEDULE OF SAMPLING, ANALYSIS & OBSERVATIONS

I. Sampling Station Location/Description

A. EFFLUENT

Station	Description
E-001	At any point in the outfall from the plant facilities between the point of discharge to the drainage ditch and the point at which all waste tributary to that outfall are present.

II. Schedule of Sampling, Analysis & Observations

A. The schedule of sampling and analysis shall be that given in Table 1 (attached).

B. Sample collection, storage, and analysis shall be performed according to the latest 40 CFR Part 136 or other methods approved and specified by the Board.

III. Miscellaneous Reporting

A. In addition to the maximum, minimum, and average effluent pH values, the following information about effluent pH violations shall be reported each month (report separately for over and under the pH limitations):

a. Percent of time effluent pH was outside the limitations.

b. Number of events when pH was outside the limitations

c. Total (cumulative) hours and minutes that pH was outside the limitation.

d. Duration of the longest continuous period of such violation. Note that strip charts of the effluent pH record must be retained with other laboratory records, and made available for inspection by Board staff.

B. The discharger shall retain and submit (when required) the following information concerning the monitoring program for organic and metallic pollutants.

a. Description of sample stations, times and procedures.

b. Description of sample containers, storage, and holding time prior to analysis.

c. Quality assurance procedures together with any test results for replicate samples, sample blanks, and any quality assurance tests, and the recovery percentages for the internal and surrogate.

IV. Modification to Part A

Exclude paragraphs D.1.A, D.4., and D.5.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established by this Board.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice form the Executive Officer or request from the discharger and revisions may be ordered by the Executive officer or Regional Board.

Steven R. Ritchie
Executive Officer

Effective Date 6/16/93

Attachments:
Table 1

TABLE I
SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

Station	Constituent	Unit	Type of Sample	Frequency of Analysis
E-001	Flow	gpd	continuous	continuous
	Oil & Grease	mg/l Kg/day	grab	monthly(1)
	TSS	mg/l	24-hour-composite	weekly
	PH	pH units	continuous	continuous
	Settleable solids	ml/l-hr	grab	weekly
	Temperature	deg F		weekly
	TDS	mg/l	grab(when cooling tower blowdown is being discharged to outfall)	monthly
	Arsenic	ug/l kg/day	24-hour composite	yearly
	Cadmium	ug/l kg/day	24-hour composite	yearly
	Chromium, Total	ug/l kg/day	24-hour composite	monthly
	Copper	ug/l kg/day	24-hour composite	weekly
	Silver	ug/l kg/day	24-hour composite	yearly
	Lead	ug/l kg/day	24-hour composite	yearly
	Mercury	ug/l kg/day	24-hour composite	yearly
	Nickel	ug/l kg/day	24-hour composite	yearly
	Zinc	ug/l kg/day	24-hour composite	weekly

Station	Constituent	Unit	Type of Sample	Frequency of Analysis
E-001				
	Toxicity	% survival	composite	quarterly
	All Applicable Standard Observations			monthly

LEGEND

FREQUENCY OF ANALYSIS

Weekly = Once each week
Monthly = Once each month
Yearly = Once each year
Biweekly = Once every two weeks

FOOTNOTE

1) Oil & grease sampling shall consist of 3 grab samples taken at 2-hour intervals during the sampling day, with each grab being collected in a glass container. The entire volume of each sample shall be composited prior to analysis. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsing shall be added to the composite wastewater sample for extraction and analysis.